



## COLUMBIA RIVER INTER-TRIBAL FISH COMMISSION

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TO: Technical Management Team (TMT)  
FROM: Kyle Martin, *Senior Hydrologist*, CRITFC Hydro Program  
DATE: June 4, 2003

SUBJECT: Impact of Pool Fluctuations on 2003 Spring Treaty Fishery—Revised Summary

CRITFC submitted three System Operation Requests (2003-C1, 2003-C2, 2003-Yakama1) via the NMFS' TMT forum in support of this spring's treaty fishing. The CRITFC request asked for (1) specific elevations and (2) stable pool elevations during April 24-26, May 22-24 and 29-31.

Criterion #1 asked to operate the pools within a one-foot specified elevation range. The Corps replied with a commitment to a 1.5-foot range, and then only in Bonneville pool, as they have done so since 1996 (according to the Corps' interpretation of the "Ted Strong agreement"). The Corps claims the top operating limit at the Bonneville pool is 76.5 feet, and not 77 feet (full pool) as outlined in the CRITFC request, and will not exceed that upper limit except for an emergency.

The table below shows the hourly compliance of CRITFC's elevation range criteria during the treaty fishery. On average, the Bonneville pool complied 13% of the time. Using the Corps 75.5 to 76.5 foot range, compliance was 53%. The Celilo (The Dalles) pool complied 59% of the time. The John Day pool complied 35% of the time.

2003	Bonneville Pool	The Dalles Pool	John Day pool
1 foot range (CRITFC):	76 - 77 ft	158.5 - 159.5 ft	263.5 - 264.5 ft
APR 24 - 26	39%	44%	15%
MAY 22 - 24	0%	64%	20%
MAY 29 - 31	0%	70%	69%
1 foot range (COE):	75.5 - 76.5 ft	158.5 - 159.5 ft	263.5 - 264.5 ft
APR 24 - 26	92%	44%	15%
MAY 22 - 24	66%	64%	20%
MAY 29 - 31	2%	70%	69%
1.5 foot range (COE):	75 - 76.5 ft	158 - 159.5 ft	263 - 264.5 ft
APR 24 - 26	100%	84%	77%
MAY 22 - 24	98%	95%	80%
MAY 29 - 31*	95%	93%	82%

\*Corps agreed to a 74-75.5 foot range at Bonneville, in coordination with CRITFC.

Pool elevation data is a good measure as to the absolute pool fluctuations (Criterion #2) as shown in figures 1 (Bonneville) and 2 (The Dalles). If the criterion was to limit fluctuations to one foot or less, irrespective to any absolute elevation criteria, then the Bonneville pool (which stayed near 0.5 foot) complied most of the time (except during the May 29-31 fishery), as did The Dalles and John Day. The Corps seems to be reducing the absolute pool fluctuations, even if they are not in full compliance with the elevation criteria.

Rudd Turner of the Corps recently pointed out that two forebay gages exist at Bonneville dam. The Corps uses the “HS” (spillway) gage as their official gauging station. The Bonneville pool data that CRITFC has downloaded over the last few years has been updated with the “HS” data and compliance statistics for 2002 and 2001 have been re-calculated and given below.

<b>2002</b>	<b>Bonneville Pool</b>	<b>The Dalles Pool</b>	<b>John Day pool</b>
1 foot range (CRITFC):	76 - 77 ft	158.5 -159.5 ft	263.5 - 264.5 ft
APR 2 - 13	30%	80%	91%
APR 15 - 20	29%	45%	66%
APR 25 -27	36%	41%	21%
MAY 2 -4	10%	39%	26%
MAY 10 -11	62%	41%	49%
MAY 17 - 18	78%	3%	11%
Seasonal Average:	41%	42%	44%
1 foot range (COE):	75.5 - 76.5 ft	158.5 -159.5 ft	263.5 - 264.5 ft
APR 2 - 13	80%	80%	91%
APR 15 - 20	77%	45%	66%
APR 25 -27	93%	41%	21%
MAY 2 -4	84%	39%	26%
MAY 10 -11	97%	41%	49%
MAY 17 - 18	100%	3%	11%
Seasonal Average:	89%	42%	44%
1.5 foot range (COE):	75 - 76.5 ft	158 -159.5 ft	263 - 264.5 ft
APR 2 - 13	96%	98%	100%
APR 15 - 20	100%	85%	100%
APR 25 -27	100%	80%	82%
MAY 2 -4	100%	89%	89%
MAY 10 -11	100%	97%	100%
MAY 17 - 18	100%	65%	95%
Seasonal Average:	99%	86%	94%

<b>2001</b>	<b>Bonneville Pool</b>	<b>The Dalles Pool</b>	<b>John Day pool</b>
1 foot range (CRITFC):	76 - 77 ft	158.5 -159.5 ft	263.5 - 264.5 ft
MAR 27 - MAR 31	52%	60%	100%
APR 2 - 7	30%	73%	100%
APR 9 - 14	41%	8%	64%
APR 17 - 19	26%	89%	98%
APR 26 - 28	21%	95%	92%
MAY 4 - 5	14%	100%	100%
MAY 24 - 26	28%	57%	95%
Seasonal average:	30%	69%	93%

1 foot range (COE):	75.5 - 76.5 ft	158.5 -159.5 ft	263.5 - 264.5 ft
MAR 27 - MAR 31	94%	60%	100%
APR 2 - 7	88%	73%	100%
APR 9 - 14	94%	8%	64%
APR 17 - 19	97%	89%	98%
APR 26 - 28	79%	95%	92%
MAY 4 - 5	73%	100%	100%
MAY 24 - 26	75%	57%	95%
Seasonal average:	86%	69%	93%

1.5 foot range (COE):	75 - 76.5 ft	158 -159.5 ft	263 - 264.5 ft
MAR 27 - MAR 31	99%	100%	100%
APR 2 - 7	100%	90%	100%
APR 9 - 14	100%	60%	98%
APR 17 - 19	100%	100%	100%
APR 26 - 28	100%	100%	100%
MAY 4 - 5	100%	100%	100%
MAY 24 - 26	100%	79%	100%
Seasonal average:	100%	90%	100%

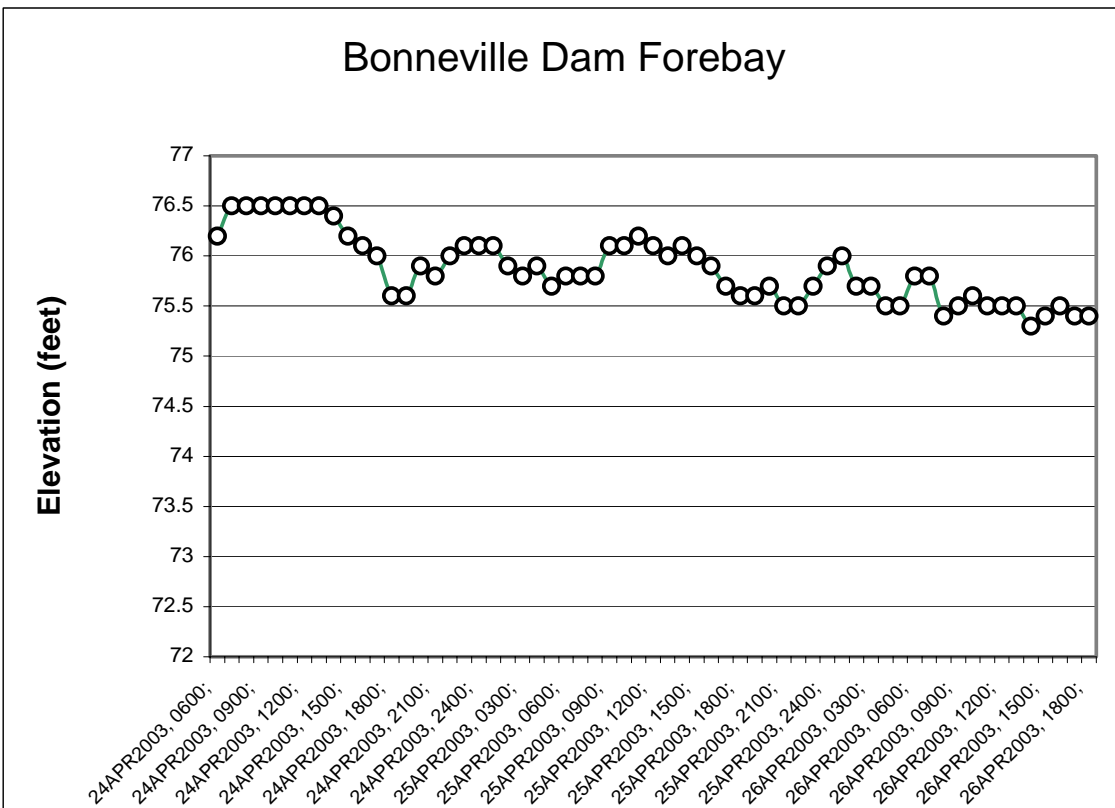


Figure 1a. Observed pool elevations during April 22-24, 2003 spring treaty fishing (BON pool).

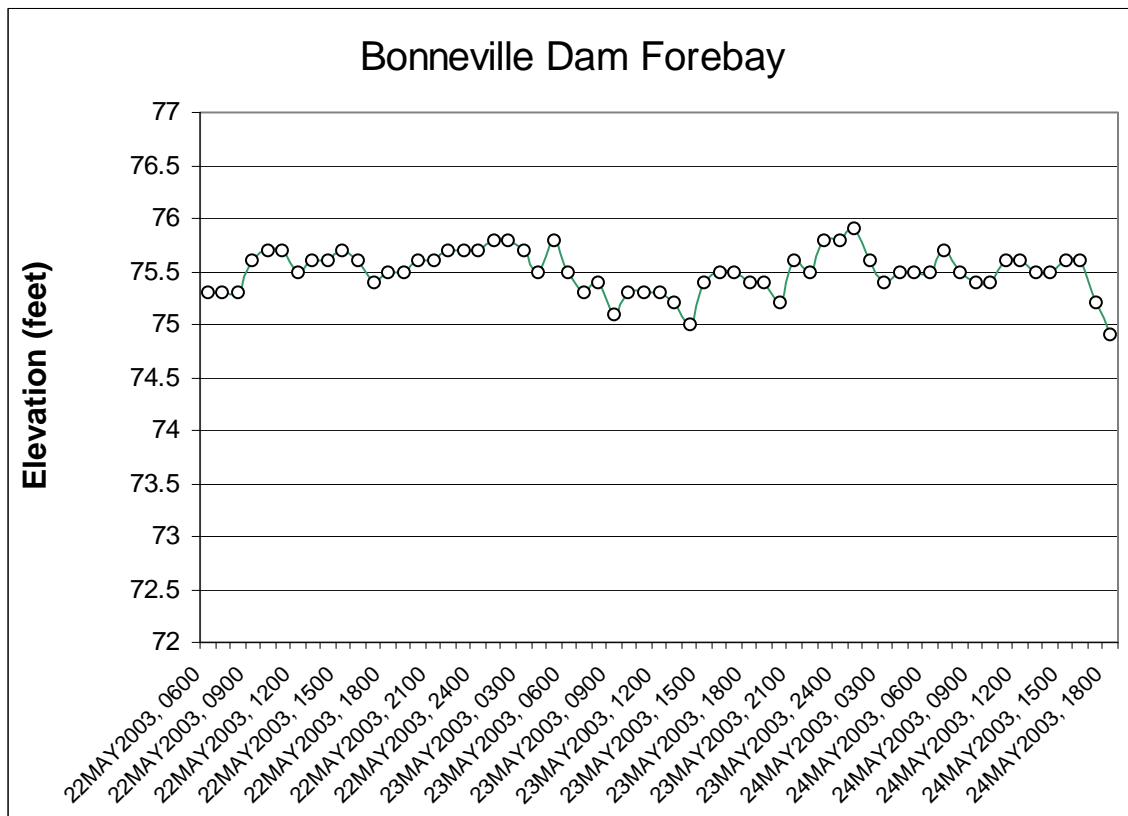
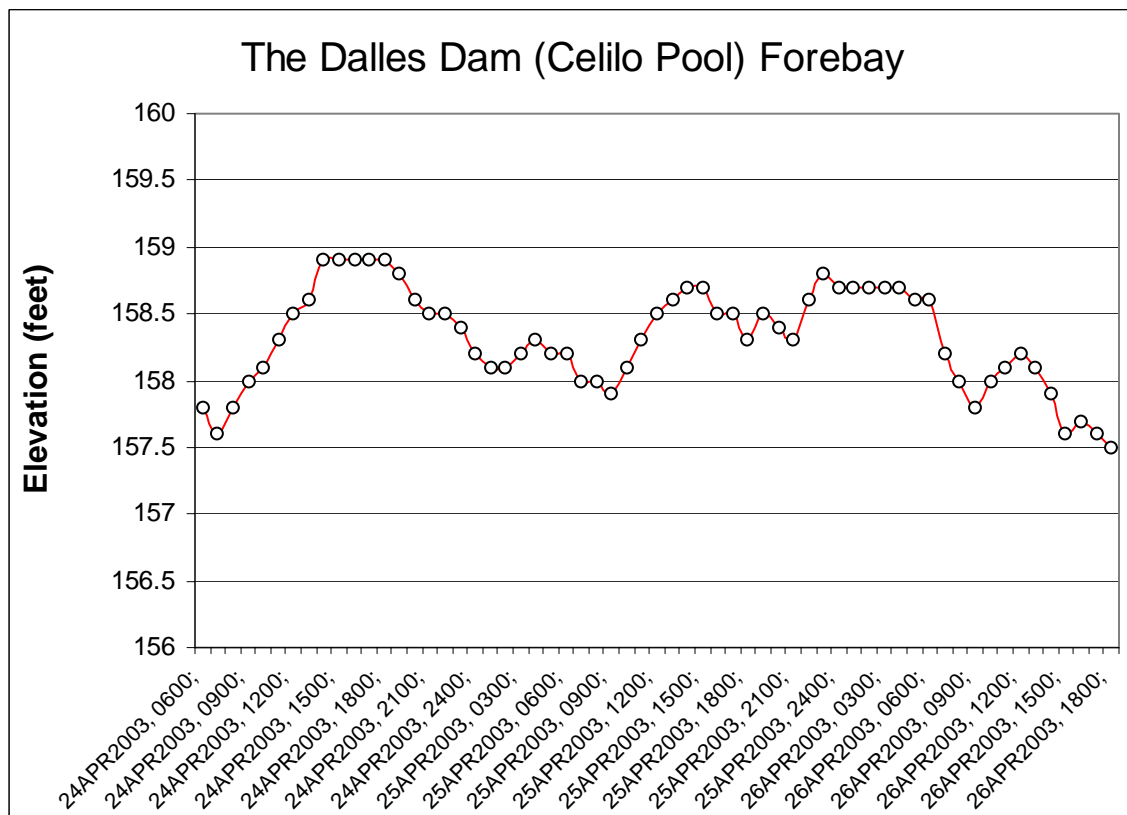
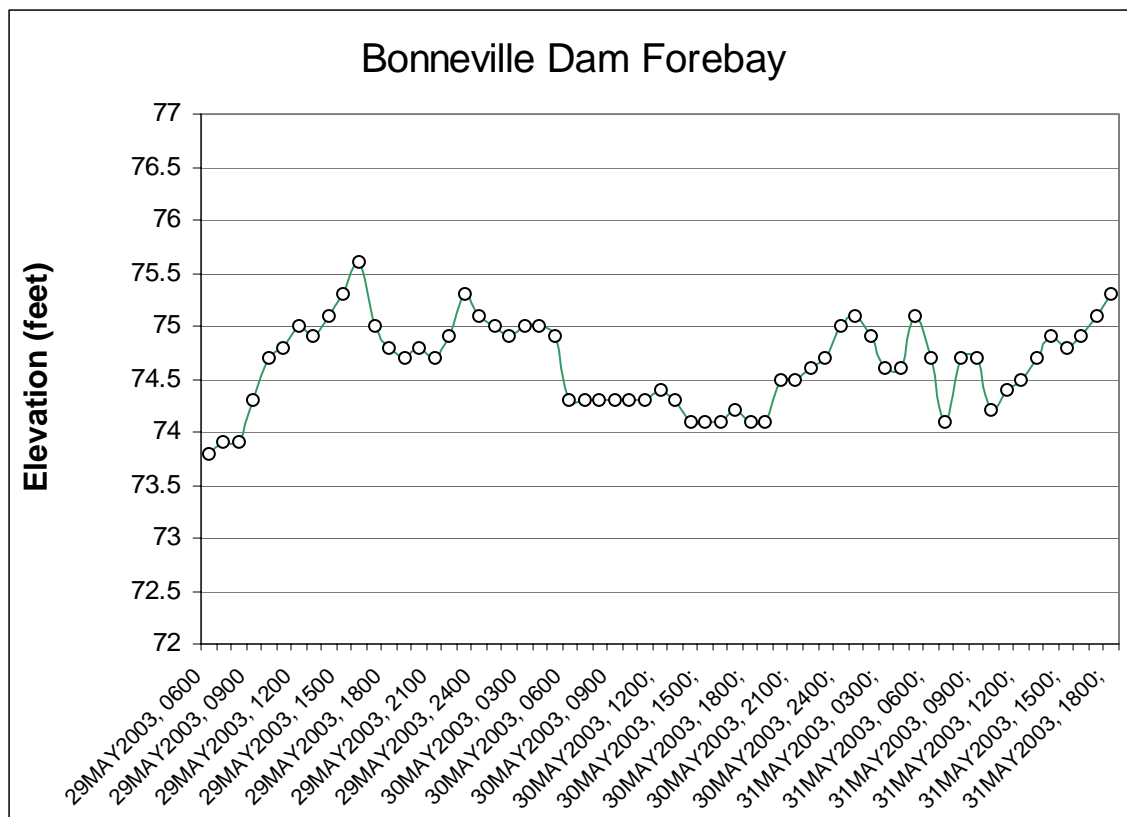


Figure 1b. Observed pool elevations during May 22-24, 2003 spring treaty fishing (BON pool).



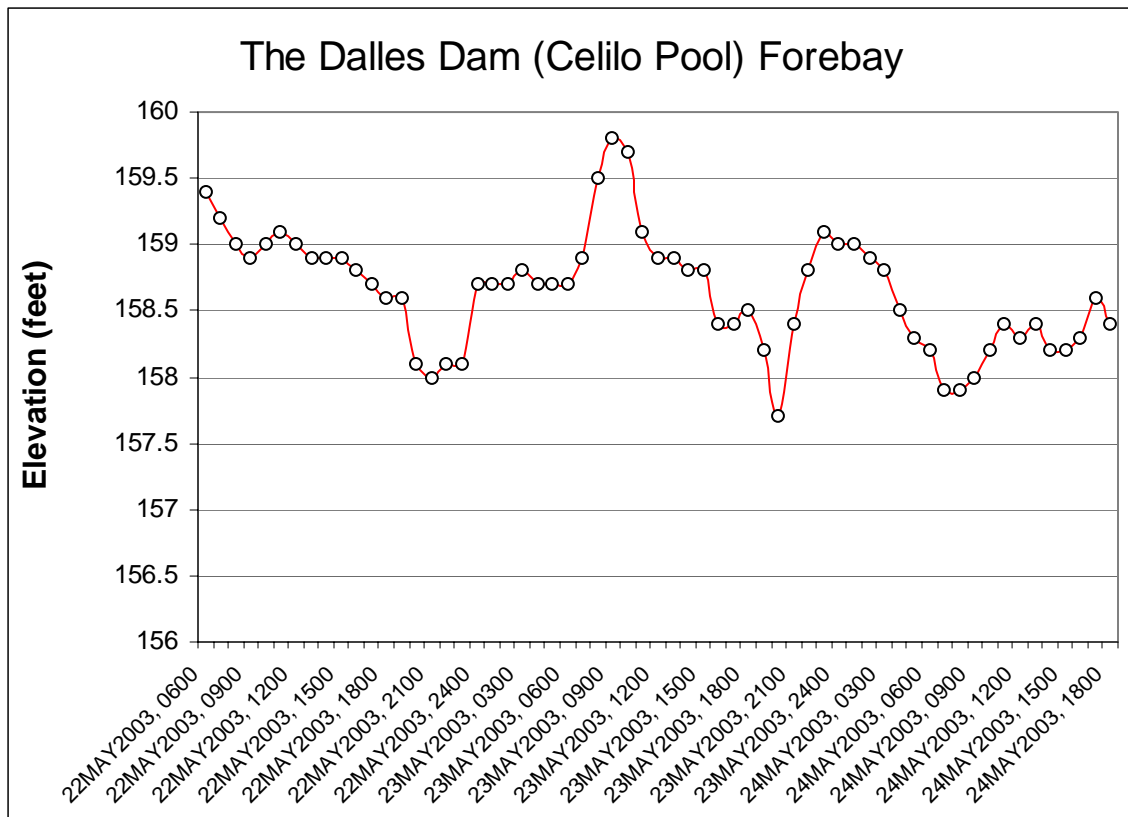


Figure 2b. Observed pool elevations during May 22-24, 2003 spring treaty fishing (TDA pool).

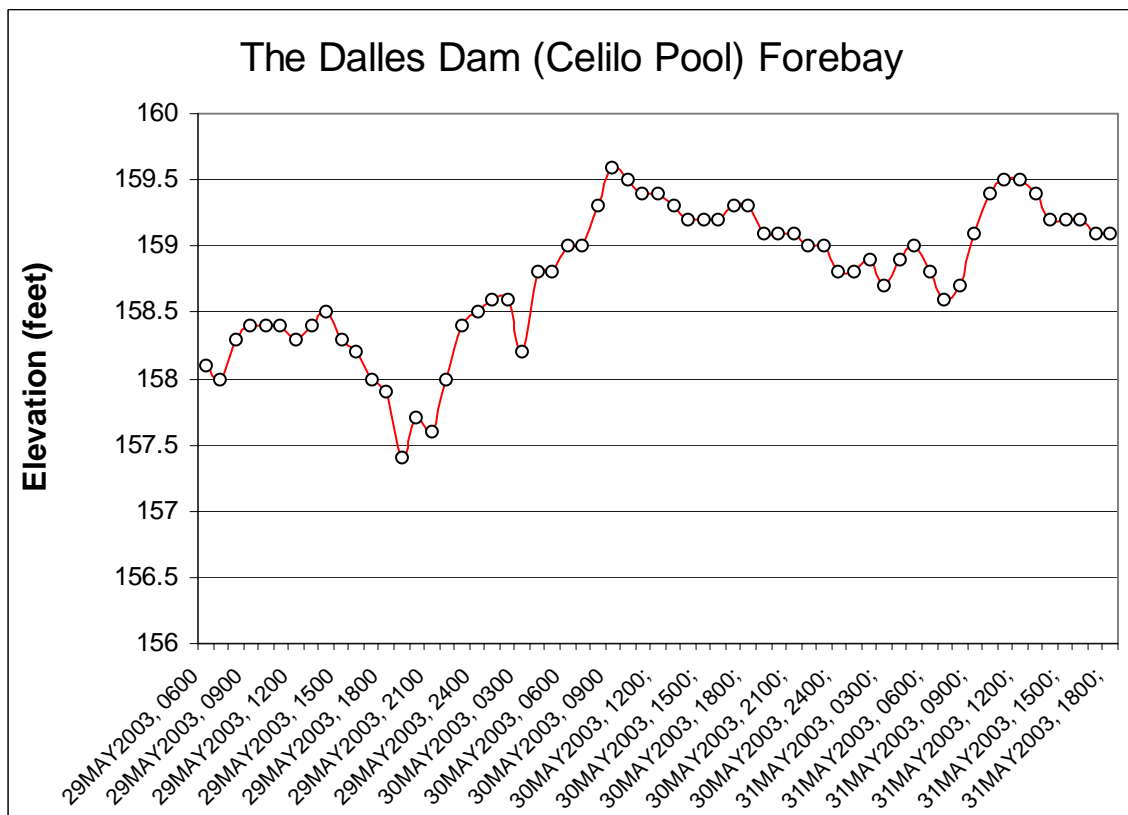


Figure 2c. Observed pool elevations during May 29-31, 2003 spring treaty fishing (TDA pool).